DESIRABLE & UNDESIRABLE PHYSICAL ELEMENTS IN RENTAL & CONDOMINIUM HIGHRISES

A REVIEW OF THE LITERATURE

with funding provided by

Alberta

DEPARTMENT OF HOUSING

Innovative Housing Grants Program

DESIRABLE AND UNDESIRABLE PHYSICAL ELEMENTS IN RENTAL AND CONDOMINIUM HIGH-RISES

A Review of the Literature

January 1985

Prepared by:

David Evans
D.J.E. Consulting

The views and conclusions expressed and the recommendations made in this report are entirely those of the author and should not be construed as expressing the opinions of the Alberta Department of Housing.

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FOREWORD

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Innovative Housing Grants Program
Alberta Department of Housing
10050 - 112 Street
Edmonton, Alberta
T5K 2J1

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EXECUTIVE SUMMARY

The purpose of this paper was to review Canadian and American literature on desirable and undesirable physical elements in privately developed rental and condominium high-rises, and to classify those physical elements in terms of their perceived value from the point of view of renters, managers and building owners/developers. As well, any of the literature which provided insight into high-rise living was also reviewed.

The review of the literature was intended to establish a context and focus for future research.

The review found that:

a) high-rise renters and condominium owners have similar needs and preferences, but they react differently to their environment because of the type of economic interest they have in their housing;

b) no literature exists, outside of general needs and preference studies of renters and condominium owners, that evaluates the needs, preferences and experiences of managers and developers;

c) none of the literature identifies changes made to physical elements in private or common areas to reduce operating and maintenance costs or increase residents' level of satisfaction with their housing;

d) studies done on Alberta are out-of-date and do not evaluate the results of the recent building boom in the province; some areas, particularly in Edmonton, have never been researched; and

e) there has been no cost/benefit analysis done on the requirements of either Calgary's or Edmonton's Land Use By-Law; no evaluation of how the By-law requirements affect residents' level of satisfaction has been done.

It was concluded from the review of the literature that in-depth research should be conducted into how physical elements of high-rise buildings affect renters' and condominium owners' level of satisfaction and the cost of building operation and maintenance. As well, changes made to physical elements by renters, condominium owners and managers to increase resident level of satisfaction and/or reduce operating and maintenance costs should be identified and analyzed. This research will help in the planning of future high-rise projects.

1.0 INTRODUCTION

The recent "boom" in Alberta resulted in the construction of many rental and condominium high-rises. Now, most residential buildings in Edmonton's and Calgary's downtown areas and communities adjacent to these areas are privately developed and owned high-rises; the remaining high-rises are scattered throughout both cities. Other municipalities in Alberta have also experienced high-rise construction.

High-rises in Alberta are built under requirements set out in municipal land use by-laws and the Alberta Building Code. Project planning also takes the developer's economic needs and the architect's understanding of the market into account. These forces combine to determine the architecture and the physical elements of any high-rise.

To date, there have been no comprehensive studies available to the general public and industry, of the Calgary or Edmonton high-rise markets, to determine if these combined forces have met the needs of tenants and owners.

In fact,

> "... there has been little attention paid to ways in which the high-rise residential environment could be altered to better suit the needs of its residents ... little consideration has been given to the kinds of facilities and services that could be provided in the building ... to allow the high-rise to better fulfill residents' needs." (Homenuck and Morgenstern, 1977:18)

1.1 Purpose

The purpose of this study is:

a) to review the literature on desirable and undesirable physical elements in privately developed rental and condominium high-rises;

b) to classify those physical elements identified in the literature, in terms of their perceived value from the point of view of residents, managers and building owners/developers; and

c) to review and evaluate any of the literature which provides relevant insight into high-rise living.

This literature review is intended to establish a context and focus for future research.

1.2 Definitions

Terms must be clearly defined and understood. Below are important terms used throughout this paper.

a) High-rise: a multi-unit, residential building having five or more floors and one or more elevators.

b) Rental high-rise: a high-rise where the residents pay rent to a single landlord.

c) Condominium high-rise: a high-rise registered as a condominium with Alberta Land Titles, where each unit has been sold separately and a condominium association with a Board of Managers is active. Buildings which have been registered as condominiums, but which are operating as rental high-rises are not condominiums.

d) Walk-up apartment: a multi-unit residential building with fewer than five floors and which usually does not have an elevator. A walk-up apartment can either be rental or have condominium status as defined in definition c).

e) Private area: any part of a residence including the balcony, which is for the exclusive use of the resident(s).

f) Common area: any part of a high-rise which is used by the residents of more than one residence in the building. These areas include hallways, stairwells, elevators, lobbies and amenity, and parking areas.

g) Physical elements: all visible or hidden pieces which give form and function to a building. Included are everything from plumbing to wiring, to doors and cupboards, to building cladding and landscaping. Maintenance is considered a physical element in this definition.

h) Managers: any individuals and/or companies responsible for managing rental or condominium high-rises.

While all high-rise residents have many common needs and preferences, there are some basic differences between renters and condominium owners. Therefore, high-rises, in this paper, have been grouped into two types: rental and condominium.

2.0 THE LITERATURE

The literature on desirable and undesirable physical elements in high-rises largely addresses how renters and owners feel about, or what they want from their accommodation. While many needs and preferences have been identified, these have not been analyzed in context with physical changes renters and owners have made to their private areas to increase their level of satisfaction. As well, there is no study which identifies the needs and preferences of managers in building design, or that analyzes changes managers have made to physical elements to reduce operating and maintenance costs and/or increase residents' level of satisfaction.

2.1 A General Overview

Most research on high-rises has been directed at whether or not high-rise living, in general, is responsible for psychological and social pathologies (Institute for Environmental Research Inc. 1977; Hall, 1969). The effects of density and how to promote residential development in the downtown areas of Calgary and Edmonton are identified as primary concerns in two recent studies (Evans, 1980; R.L. Wilkins Architects/Planners, 1979).

Another area of interest relates to the concerns, characteristics, needs and preferences of high-rise residents. Much research has been done in the United States (Eadie, 1978; Earsy, 1974; Francesato, 1977; Greenberg and Greenberg, 1977; Pollowy, 1977; Stephens, 1976; Wekerle, 1977; Wekerle and Hall, 1972). Some work has been done in Canada (Homenuck, 1973; Homenuck et. al., 1975; Homenuck and Morgenstern, 1977; Michelson, 1973).

CMHC Saskatoon (1980) carried out a needs and preference study of apartment renters in Saskatoon. Very few of those surveyed lived in high-rises and the data from respondents living in high-rises is not given separate consideration.

In Alberta, little research has been done on high-rises.

The City of Calgary Planning Department (1978; 1979), in developing guidelines for amenity requirements for medium and high density projects, researched the Calgary market. Of the 224 buildings studied by the Department, only 20 (9%) were high-rises. A recommendation to monitor the effects of the guidelines to assess whether the requirements met people's needs was never acted upon.

The City of Edmonton Planning Department has studied Edmonton's residential population, its characteristics and trends. However, the study is a universal population study and high-rise residents are not analyzed separately.

Nu-West Development Ltd. (Nu-West), in 1976, commissioned Dr. James B. Graham (1976a; 1976b) to conduct an in-depth survey of the Calgary housing market. The questionnaire which Dr. Graham prepared included some very specific questions on residents' needs and preferences. The final report which contains the analysis of the survey results is private and not available. However, the gross data were made available by Dr. Graham and are reviewed in this paper.

Little work on condominiums has been done.

There are "buyer beware" books and publications which explain how to buy, sell and live in condominiums (Gray, 1975).

In Canada, research has been done on the supply of, and demand for, condominiums in Toronto (Hitchcock and Lewis, 1981), needs and preference assessments and owner profiles in British Columbia (Eadie, 1978) and Alberta (Alberta Consumer and Corporate Affairs, 1977) and the legal aspects of condominium development and ownership (Alberta Consumer and Corporate Affairs, 1976). Kentridge and Oliphant (1972) evaluate the cost-benefit of high-rise development to municipalities.

CMHC has recently completed, but has not yet released, a national condominium study directed at identifying the needs and preferences of condominium residents, as well as drawing condominium owner profiles. Some of the study data on Calgary was made available by CMHC Calgary (1984). It was not necessary to specifically review Edmonton data for reasons outlined further on.

While not directly relevant to this review, a number of studies provided insights which are discussed in this paper, particularly as they relate to future research.

While architects, developers and managers informally assess their buildings, none of these assessments have been written up and published. In any case, the assessments are considered proprietary.

2.2 High-rise Renters

The Nu-West survey (Graham, 1976a; 1976b) deserves special consideration because it was done in Calgary in preparation for a high-rise proposal for the Eau Claire district in downtown Calgary. Because the final report is unavailable (only gross data have been made available), it is impossible to comment on the conclusions drawn from the results of the large (n=2026) and extensive survey. In any case, the survey and, therefore, the study, have a number of limitations.

The Nu-West survey was conducted before the Calgary building boom, before there were any high-rise condominiums and before the City of Calgary's Land Use By-law, with new amenity requirements, came into force. Renters were questioned on what they liked, disliked, would change or seek in other accommodation. Managers were not surveyed. As well, no questions on management, a high predictor of resident satisfaction (Pollowy, 1977; Wekerle, 1972) were included in the survey.

Important analysis of cross-tabulations of the data is unavailable and gross frequencies do not separate out high-rise renters from others. But because 55% of the respondents live in an "apartment and condominium (more than 3 stories)" (Graham, 1976b) before there were any high-rise condominiums in Calgary, the gross results can be considered relevant to high-rise rental residents, particularly if the results are supported by findings in other literature.

The question in the Nu-West survey "which floor do you live on?" (Graham, 1976b), has relevance for future research.

Greenberg and Greenberg (1977) found that those living higher up in high-rises perceive their units as quieter, more efficient, secure, conducive to studying, convenient and functional than those living on lower floors.

Ironically, Greenberg and Greenberg also found that the greater the density (reflected in building height), the more residents perceive their units as inadequate, finding their apartments to be too small, insecure, hostile, narrow, cramped, crowded and not conducive to studying. The greater the density, the more residents were dissatisfied with kitchen appliances, electrical outlet placements, their floorplan and building maintenance. Finally, increased competition for common areas and facilities causes some dissatisfaction.

Future research could not only confirm the above findings, but could also help in identifying what changes those living on lower floors have made or would like made to their units to increase their level of satisfaction. From a resident's point of view, the optimum height and density for high-rises may also be determined.

The results of the Nu-West survey indicate that people find the number of bedrooms, large storage areas, soundproofing, the overall size of their residence, large living rooms, security systems, view, parking structure and balcony/patio/deck as the most important reasons why they chose their present residence. The results of the survey also indicate that residents have a high level of satisfaction with these elements.

While respondents indicate they are generally satisfied with their present residence, they also indicate that they would change their residence if they could have a large kitchen, bathroom, dining room, entry and larger bedrooms.

Michelson (1973) found that apartment size impacts level of satisfaction. Homenuck (1977) confirms what Michelson found when he states that in North America, satisfaction is related to crowding or the lack of space within a unit.

Stephens (1976) concluded that too much space in high-rises is used for hallways and lobbies. Lobbies, in particular, were given special attention during Calgary's building boom. Future research could assess whether too much space is dedicated to building areas and assess whether these larger areas add significantly to construction and maintenance costs.

Again, while respondents to Nu-West's survey indicate they are generally satisfied, they also want more closets, better soundproofing, more and faster elevators and larger windows. They would not change practical floorplans, large balconies, view, location (an important reason for choice of residence and staying) and recreational facilities.

The CMHC Saskatoon (1980) survey confirmed the above and also found that tenants complain about poorly hung doors, no locks on patio doors and poor carpet installation.

Future research can assess whether or not new buildings in Calgary and Edmonton address the complaints, needs and preferences identified in the Nu-West and CMHC Saskatoon surveys.

Homenuck (1973: 51) states "... that satisfaction with basic living spaces, such as kitchen and living room, are the most important variables in terms of achieving satisfaction with the size of the home ... satisfaction with less essential features of high-rise complexes is independent of overall satisfaction with their homes." Hall (1969) pointed out that homes must first and foremost be amenable to reducing stress, therefore, there is a need for more, not less, space in downtown high-rise units.

Future research could assess whether the rush to include "luxury" elements in new high-rises balanced the trend toward building smaller units.

In assessing people's use of, and desire for, certain recreational and other facilities, Michelson (1973) found that recreational facilities are intensely utilized by new residents in the months immediately after moving in, but that the use of these facilities tapers off rapidly.

The results of the Nu-West survey indicate that while most respondents do not have access to many recreational facilities, they either do not use them when they are available or would not consider using them if they were available. Only swimming pools are relatively well utilized even though many indicate they would not use them if available.

CMHC Saskatoon (1980) also found that while people not having access to facilities say they would use them if they were available, the actual use of facilities in buildings having them is low.

There may be sociological reasons why people do not utilize in-building facilities. Earsy and Colton (1974) point out that high-rise residents are highly mobile and willing to travel relatively long distances to use desired facilities. Homenuck (1973) confirms this and also indicates that high-rise residents tend to reject in-building facilities which attract people from outside the complex.

The City of Calgary Planning Department (1978; 1979) identified various amenities it considered acceptable (pools, sauna, lobbies, etc.), but did not analyze use patterns or conduct any cost/benefit analysis of the proposed amenity requirements. While the Department indicated a concern that the cost of providing amenities did not affect rents, the recommended follow-up surveys to assess the impact of the requirements, which came into effect in 1980, have never been done.

Nu-West found that some recreational facilities, which were often included in projects built after the Calgary Land Use By-law was adopted, are desired. These include tennis and squash courts and exercise rooms/equipment. Future research could assess whether or not these facilities are utilized, as well as their cost/benefit.

While the cost of including amenity areas and facilities may be high relative to actual use, elimination of any must be given careful consideration.

Wekerle and Hall (1972) indicate that facilities like pools and tennis courts are important social resources even though little utilized. Because singles do not have a ready made system of communication or social relationships as do families, common area facilities are important sources of social contacts.

Wekerle and Hall (1972) also found that while many high-rise residents complain about slow elevators, social relationships are formed more often in slow running elevators. This may have an impact on resident satisfaction and, therefore, length of tenancy.

However, Wekerle and Hall do feel that there can be too many areas where people can meet. Future reearch could not only test their findings, but identify the most important and most often used amenity areas and facilities so unnecessary areas and facilities can be eliminated from future projects.

Almost 80% of the respondents to the question in the Nu-West survey "If you had the opportunity to move to a residence similar to the one which you live in but in another section of the city, would you move?" answered they would not (Graham, 1976b). Maybe "a high level of neighborhood satisfaction can lead people to overlook inadequacies in their particular home environment" (Homenuck and Morgenstern, 1977:17). It is important to note, therefore, that resident satisfaction is probably based on more than just unit and building design, and is another important area for future research.

Wekerle and Hall (1972) found that the most satisfied residents were those who had lived where they had for a short period of time. Those living where they had for 5 or more years were the most dissatisfied. It appears that short-term residents, unlike long-term residents, are more interested in social relationships than the physical elements of a building as they plan to move out and set up another home anyway. Long-term residents are more concerned about "making their own place" and being able to modify their unit to increase their level of satisfaction. Wekerle and Hall (1972:180) feel that "the wise developer, instead of discouraging tenants, would do well to provide incentives for people to modify their abode."

Wekerle and Hall (1972) also found that older, more stable residents consider common areas extension of their own living space, an attitude shared with condominium owners, and they become upset if these areas are littered or poorly maintained. Younger residents, on the other hand, feel common areas are public, not private areas. These differing attitudes can lead to conflict between the two groups and affect resident satisfaction.

Greenberg and Greenberg (1977) found that in the high-rise dormitory they studied, those who had lived there the shortest were the more dissatisfied. This finding may differ from Wekerle and Hall's because of the population studied.

For managers wishing long-term, satisfied tenants, confirmation of Wekerle and Hall's findings would be valuable. Confirmation of the statement that neighborhood can overcome dissatisfaction has broad planning implications.

2.3 Suburban High-rise Renters

Michelson (1973) found that there is a qualitative difference between downtown and suburban high-rise renters and that suburban renters are not as satisfied with their lifestyle as downtown renters. It appears that suburban high-rise renters are caught between continuing their high-rise lifestyle (a rather unique lifestyle in suburban areas) or moving into houses like most of their neighbors.

If Michelson's observations are correct, surveying suburban high-rise renters might reveal ways in which they adjust to their sociological conflict, as well as identify their special needs and preferences. The findings could be taken into account when planning new suburban high-rises.

2.4 Children and High-rises

Most North Americans agree that a high-rise is not a suitable environment for raising children. Not only are there problems of privacy, as noise made by children is considered an invasion of privacy by high-rise residents, but there are physical barriers to raising children (Pollowy, 1977).

Unlike the situation in walk-up apartments, it is difficult in a high-rise for parents to keep visual contact with their children. Outside areas and all internal common areas are either visually or physically isolated. Parents cannot react quickly (if at all) if and when problems arise. Private areas do not pose as much of a problem for parents, but even private areas are not planned with children in mind.

Because, as Francesato (1977) points out, high-rise living can be highly satisfying and may be a necessary lifestyle in the future, research directed at the few residents with children living in high-rises may provide insight not only into how these residents adapt their private spaces for children, but can solicit suggestions on how common areas can be planned to better accommodate children.

2.5 High-rise Condominium Owners

This reseacher has noticed that condominium owners take more interest in all the physical elements of their building than renters do because they not only own their units, they are part owners in the common areas, as well. Condominium owners have an investment to protect and while condominium owners have similar needs and preferences to those of renters, being owners means they have some different needs and preferences.

Eadie (1978), in a study of all types of condominiums, found that owners, like renters, want good views and larger than average sized rooms. Owners also indicated they desire more storage space, fireplaces and larger patios and balconies.

Like renters, owners complain of lack of soundproofing (Eadie, 1978), not enough parking, poor security and poor laundry facilities (Gray, 1975). Over half of the respondents to the Alberta Consumer and Corporate Affairs (1976:97) survey indicate they want other facilities in their units and that they are willing to pay for them.

Both Eadie (1978) and Alberta Consumer and Corporate Affairs (1977) found that maintenance of the common areas and facilities is a major concern of owners.

Unlike renters, who want a reasonable rent and can easily move and will move when rents get too high, condominium owners can control their rent (ie. mortgage), in part, by deciding how much they want to spend and how they wish to finance their purchase. Missing elements and desired physical elements may be added later and undesirable elements can be changed because owners can renovate their units.

Condominium owners, unlike renters, have to pay property taxes and condominium fees. Owners, therefore, are very concerned about any increase in the cost of utilities, building maintenance and municipal services.

Eadie (1978) found that many amenities in condominium high-rises, important at the time of purchase, are not used extensively. These include saunas, steam baths and whirl pools; popular additions to condominium high-rises. Condominiums, like rentals, contain amenities which are used to lure potential buyers, but are little used and, therefore, may unnecessarily increase the cost of purchase and condominium fees. Obviously, researching the cost/benefit and use patterns of amenities in high-rise condominiums is as important as researching them for rental high-rises.

Condominium owners complain more often than renters of sociological problems. Badly behaved renters, as well as the poor attitude of other owners are often cited as serious problems (Eadie, 1978; Gray, 1975). Because owners cannot move as easily as renters when they are dissatisfied with their residence, how owners handle sociological problems should be researched.

Finally, researching the changes made by condominium owners to their units, while in its own right useful for future planning, is a means for confirming Wekerle and Hall's (1972) statement that the ability to create a home has positive impact on high-rise residents' level of satisfaction.

2.6 The 1984 National Condominium Study

The 1984 national condominium study funded by CMHC Ottawa had not been released when research for this paper was being conducted. However, some data on Calgary, used in the study, was made available by CMHC Calgary.

The data included all types of condominiums and it is not known if high-rises will be given special attention in the final report. The Calgary data are lumped together with Saskatoon data. The sample is small (n=125) and Saskatoon, until recently, did not have any condominium high-rises. A recently completed high-rise condominium was not included in the survey (CMHC Ottawa, personal discussion).

The study appears to be like others reviewed here. It is a needs and preference and owner profile study. It is doubtful if any new insights into Calgary and Edmonton will be found in the final report.

3.0 CONCLUSIONS

a) The literature on desirable and undesirable physical elements of high-rises largely identifies needs and preferences related to resident satisfaction. Changes to physical elements made by renters and condominium owners to increase their level of satisfaction have never been identified and analyzed.

b) Managers have never been surveyed to identify their needs and preferences or identify what changes they have made to physical elements to control maintenance and operating costs and/or meet the needs of renters or owners.

c) High-rise renters and high-rise condominium owners have many similar needs and preferences. Owners are different from renters because they own and can renovate their units, have a financial interest in their building and an economic interest in what physical elements are in their building, how these elements are maintained and how they are utilized. Renters have an economic interest in the building only as it pertains to their rent and must move when the physical elements of their unit or the building do not meet their needs and preferences.

d) Studies done before the building boom in Alberta are incomplete and out-of-date. There is no up-to-date study which assesses whether or not already identified needs and preferences have been satisfied by new buildings.

e) There has been no cost/benefit analysis of amenity requirements for high-rises set out in the Calgary Land Use By-law. As well, there has been no assessment of how the By-law requirements have affected residents' level of satisfaction.

f) There has been no study of high-rises in Edmonton.

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Alberta Housing Corporation, Edmonton.

Rick Balbi, Architect, Rick Balbi Architect Ltd., Calgary.

Margo Clark, Reference Librarian, Canadian Housing Information Centre, CMHC Ottawa, Ottawa.

Cohos, Evamy and Partners, Architects, Calgary.

Rick Dalton, President, Statesman Management and Realty Ltd., Calgary.

Colleen Douglas, Librarian, City of Edmonton Planning Department Library, Edmonton.

Don Davies, Multi-family Committee Chairman, HUDAC/Equity Capital Corporation Ltd., Calgary.

Don Dwyer, Condominium Committee, HUDAC, Calgary.

Gerry Forseth, Architect and President, Alberta Association of Architects, Calgary.

Dr. James Frideres, Professor, Department of Sociology, University of Calgary, Calgary.

Paddy Fuller, CMHC Ottawa, Ottawa.

Dr. James B. Graham, Assistant Dean, Faculty of Management, University of Calgary, Calgary.

Glenn F. Lyons, Project Planner, City of Calgary Planning and Building Department, Calgary.

Librarian, Alberta Housing, Edmonton.

Mrs. Read, Librarian, City of Calgary Planning Department, Calgary,

John Scholtz, Housing Analyst, CMHC Calgary, Calgary.

Chris Terry, Project Manager, CMHC Ottawa, Ottawa.

Jim Waugh, Environmental Design Department, University of Calgary, Calgary.

APPENDIX A

One of the purposes of this review of the literature on desirable and undesirable physical elements in rental and condominium high-rises is to classify those elements identified in the literature in terms of their perceived value from the point of view of renters, managers and building owners/developers.

While the literature provides no insight into how managers and building owners/developers perceive the physical elements of their buildings, the literature does provide insight into how renters (and, therefore, because of some similiar needs and preferences, condominium owners) perceive many physical elements. Those physical elements and how they are perceived are identified in the following chart.

THE DESIRABLE AND UNDESIRABLE PHYSICAL ELEMENTS
OF RENTAL AND CONDOMINIUM HIGH-RISES
IDENTIFIED IN THE LITERATURE

(From A Resident's Point of View)

DESIRABLE	DESIRABLE OR UNDESIRABLE DEPENDING ON SITUATION	UNDESIRABLE
Good Security	*Number of Units (Density)	Small Unit Size
Balcony/Patio/Deck	*Floor One Lives On (Height)	Poorly Hung Doors
Soundproofing	Number of Bedrooms	Poor Carpet Installation
Large Rooms	Size of Residence	No Locks On Patio Doors
Closets	*Size of Public Areas	*Lack of Visual Contact With Children
Elevators	*Elevator Speed	Not Enough Parking
Practical Floorplan	*Recreation and Other Facilities	Poor Laundry Facilities
*Fireplace	Location	
Parking Structure	*Management	

*Cited in report (along with some non-physical elements) as requiring more research.